Northrop Grumman
500 – 800 N. Douglas St.
El Segundo, CA 90245
ID No.: 18294

EQUIPMENT DESCRIPTION:

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions	Conditions
Process 3: INTERNAL COMBUSTION					
System 2: EMERGENCY, BLDG. WC 203					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, WHITE, MODEL D4800, 102 BHP A/N 512519	D125		NOx: PROCESS UNIT**	NOx: 469 LBS/1000 GAL DIESEL (1); PM: RULE 404 (9)	C1.9 ~~C1.14~~ C177.1 E448.1 K67.10
System 3: EMERGENCY, BLDG. WC 204					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, PERKINS, MODEL T4236, 83.8 BHP A/N 512520	D126		NOx: PROCESS UNIT**	NOx: 469 LBS/1000 GAL DIESEL (1); PM: RULE 404 (9)	C1.9 ~~C1.14~~ C177.1 E448.1 K67.10

A/N 451731: Title V/RECLAIM facility permit revision

CONDITIONS:

C1.9: The operator shall limit the operation to no more than 200 hours in any one year. To comply with this condition, the operator shall install and maintain a non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

C1.14: ~~The operator shall limit the operating time to no more than 50 hours in any one year. For the purpose of this condition, operating time shall be defined as maintenance and testing hours only. Operation beyond 50 hours per year for maintenance and testing is allowed only in the event of a loss of grid power or up to 30 minutes prior to a rotating outage provided that: 1) the electrical grid operator or the electric utility has ordered rotating outages in the control area where the engine is located or has indicated that it expects to issue such an order at a certain time; and 2) the engine is located in a utility service block that is subject to the rotating outage.~~

E448.1: THE OPERATOR SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

The engine shall not be operated more than 200 hours in any one year, which includes 20 hours in any one year for maintenance and testing.

Operation beyond the allotted time for engine maintenance and testing shall be allowed only in the event of a loss of grid power or up to 30 minutes prior to a rotating outage, provided that the utility distribution company has ordered rotating outages in the control area where the engine is located or has indicated that it expects to issue such an order at a certain time, and the engine is located in a utility service block that is subject to the rotating outage.

In the event as described in the paragraph above, the engine shall be terminated immediately after the utility distribution company advises that a rotating outage is no longer imminent or in effect.

This engine shall not be used as part of an interruptible service contract in which a facility receives a payment or reduced rates in return for reducing electric load on the grid when requested by the utility or the grid operator.

K67.7: The operator shall keep records, in a manner approved by the District, for the following parameters or items: Date of operation, hours of operation and reason for operation.

BACKGROUND:

Northrop Grumman submitted "change of condition" applications (a/n 512519 and 512520) to add a Rule 1470 annual maintenance and testing hourly limit to internal combustion engines permitted under device nos. D125 and D126, respectively. Under Rule 1470 (c)(3)(C)(i)(I), emergency engines that emit diesel PM greater than 0.4 g/bhp-hr shall be operated no more than 20 hours per year for maintenance and testing purposes. These engines were initially permitted in 1990 and even though the initial evaluation based PM emissions using a factor of 0.11 g/bhp-hr, Northrop Grumman does not have any source test data to verify this factor. They assume that PM emissions are greater than 0.4 bhp-hr and accept the 20 hour per year limit for each engine. Condition no. 1.14 is replaced with condition no. E448.1 for both devices.

Northrop Grumman also requested to modify facility-wide condition no. F58.1 (KRAL meter requirements). Northrop Grumman wants to change the frequency for calibrating two KRAL meters that are used to measure fuel used in two of their largest engines. They want to increase the calibration period from annually to every five years. The KRAL meters are used solely when operating the two engines because the KRAL meters measure fuel usage more accurately than time meters. Since they use the engines and meters infrequently, they feel that annual calibration is unnecessary. Staff has determined that the accuracy and reliability of the KRAL meters warrants a calibration check once every five years. The change of condition complies with RECLAIM requirements. Condition no. F58.1 reads as follows:

F58.1: For the purposes of monitoring, recording and reporting under RECLAIM, portable internal combustion engine(s) operated at this facility shall be monitored by a non-resettable timer to accurately indicate the elapsed operating time of the equipment unless monitored by a fuel meter meeting the following requirements:

1. The devices served by the fuel meters shall be electrically wired in such a manner that their operation cannot be initiated without the fuel meters first being activated.

2. The fuel meters and temperature transducers shall be calibrated once every five years by the manufacturer, KRAL-USA, Inc. or their designated representative. Dual fuel meters shall be calibrated on the same day, using the same equipment. The fuel meters shall be calibrated as specified by KRAL-USA, Inc. in the protocols

submitted to the South Coast Air Quality Management District dated July 17, 2001 without deviation unless written approval is granted.

3. The calculations of electronic flow computers, for display of flow measurement results, shall be verified at the time of the fuel meter calibration by KRAL-USA, Inc., or their designated representative. Calibration results shall be maintained at the facility for a minimum of three years after the date of calibration and made available to District personnel upon request.

4. The fuel meters and its electronic components shall be sealed by the manufacturer, KRAL-USA, Inc. or their designated representative. Such seal shall only be broken by the manufacturer, or their designated representative, for testing, maintenance or repair purposes. The fuel meter shall be re-sealed immediately after the completion of the test or repair.

5. A maintenance log shall be maintained to record every testing, maintenance, repair or calibration of a fuel meter. Each log shall be positively identified for each fuel meter and the device it serves. The log shall be kept at the facility for a minimum of three years after the end of each compliance year and made available to District personnel upon request.

6. The fuel meters shall not be equipped with keypad or buttons that allow changes to the programming or data contained in the units. Portable keypads may be used by the manufacturer, or their designated representative, for testing, maintenance or repair purposes. In addition, access to the program and data contained in the units shall be pass code protected. This pass code shall only be made available to the manufacturer, or their designated representative.

Northrop Grumman is a Title V Group A facility. A Title V renewal permit was issued to this facility on May 9, 2005. Northrop Grumman has proposed to revise their Title V renewal permit with application no. 512518. This permit revision is considered as a "de minimis significant permit revision" to the Title V renewal permit, as described in the Regulation XXX evaluation.

PROCESS DESCRIPTION:

The ICEs are used in emergency situations for powering generators. The ICEs will also be operated no more than 20 hrs/yr for maintenance and testing purposes. The ICEs will not be operated differently than previously permitted with the exception of the less time allowed for maintenance and testing operation.

EMISSION CALCULATIONS:

Since the ICEs will be operated without any changes, there will not be an increase in emissions. Previously determined emissions will carry over to these applications.

A/N 512519 & 512520:
CO = 0.25 lb/hr
ROG = 0.12 lb/hr
NOx = 2.16 lb/hr
PM10 = 0.025 lb/hr
SOx = 0.34 lb/hr

RULE ANALYSIS:

RULE 212: Public notification is not necessary because (1) there is not an emission increase with these applications (g), (2) the facility is not located within 1,000 feet of a public school and (3) there is not an increase in carcinogenic emissions and there is not a cancer risk equal or greater than one in a million.

RULES 401 & 402: AQMD database has no records of visible emissions or nuisance complaints against this facility. Compliance with these requirements is expected with the proper operation of the equipment.

Regulation XIII: There is not an emission increase with these applications.

RULE 1401: Emergency internal combustion engines are exempt from the requirements of this rule.

RULE 1470: The operating hours for maintenance and testing purposes for the engines will be limited to 20 hours per year, compliance is achieved for Rule 1470 (c)(3)(C)(i)(I).

REGULATION XXX:

This facility is in the RECLAIM program. The proposed project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or hazardous air pollutants (HAPs), and a "minor permit revision" for RECLAIM pollutants to the RECLAIM/Title V permit for this facility.

Non-RECLAIM Pollutants or HAPs

Rule 3000(b)(6) defines a "de minimis significant permit revision" as any Title V permit revision where the cumulative emission increases of non-RECLAIM pollutants or HAPs from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

Air Contaminant	Daily Maximum (lbs/day)
HAP	30
VOC	30
NOx*	40
PM_{10}	30
SOx*	60
CO	220

* Not applicable if this is a RECLAIM pollutant

To determine if a project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or HAPs, emission increases for non-RECLAIM pollutants or HAPs resulting from all permit revisions that are made after the issuance of the Title V renewal permit shall be accumulated and compared to the above threshold levels. This proposed project is the 8th permit revision to the Title V renewal permit issued to this facility on May 9, 2005. The following table summarizes the cumulative emission increases resulting from all permit revisions since the Title V renewal permit was issued:

Revision	HAP	VOC	NOx*	PM10	SOx	CO
Previous Permit Revision Total	0	2	0	7	0	35
8th Permit Revision; change of conditions (device nos. D125 & D126), change facility condition no. F58.1	0	0	0	0	0	0
Cumulative Emissions Total	0	2	0	7	0	35
Maximum Daily	30	30	40*	30	60	220

*RECLAIM pollutant, not subject to emission accumulation requirements

Since the cumulative emission increases resulting from all permit revisions are not greater than any of the emission threshold levels, this proposed project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or HAPs.

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "de minimis significant permit revision" for non-RECLAIM pollutants or hazardous air pollutants (HAPs), it is exempt from the public participation requirements under Rule 3006(b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V/RECLAIM permit will be issued to this facility.